WHAT IS CLAIMED IS

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A fluid handling device comprising a substrate and an optically transmissive diamond-like film disposed on at least a portion of the substrate.

- 2. The fluid handling device of claim 1 comprising a capillary having an internal surface and an external surface, wherein at least a portion of at least one of the internal or external surfaces includes an optically transmissive diamond-like film disposed thereon.
- 3. The fluid handling device of claim 2 wherein the external surface of the capillary includes an optically transmissive diamond-like film disposed on at least a portion thereof.

The fluid handling device of claim 1 comprising a microfluidic article comprising a microfluidic handling architecture comprising a fluid handling surface, wherein at least a portion of the fluid handling surface includes an optically transmissive diamond-like film disposed thereon.

5. The fluid handling device of claim 4 wherein the optically transmissive diamond-like film is also hydrophilic.

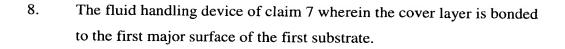
6. The fluid handling device of claim 4 comprising:

a first non-elastic, polymeric substrate comprising a first major surface that includes the microfluidic handling architecture and a second major surface; and

a second polymeric substrate that is integrally bonded to said second major surface of said first substrate, wherein the second substrate is capable of forming a free-standing substrate in the absence of said first substrate.

7. The fluid handling device of claim 4 comprising a cover layer on the microfluidic handling architecture.

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- 5 9. The fluid handling device of claim 4 wherein the microfluidic handling architecture comprises structures selected from the group consisting of microchannels, fluid reservoirs, sample handling regions, and combinations thereof.
- 10. The fluid handling device of claim 9 wherein at least one of the structures comprises a fluid handling surface, at least a portion of which has the optically transmissive diamond-like film disposed thereon.
- 11. The fluid handling device of claim 4 comprising a first polymeric substrate comprising a first major surface that includes a plurality of microfluidic handling architectures and a second major surface, wherein the article is in the form of a roll.
- The fluid handling device of claim 1 wherein the optically transmissive diamond-like film is a diamond-like glass film.
 - 13. The fluid handling device of claim 1 wherein the optically transmissive diamond-like film has disposed thereon linking agents and a reactant affixed to the linking agents to form a binding site.
 - 14. The fluid handling device of claim 13 wherein the linking agents are covalently attached to the diamond-like film.
- The fluid handling device of claim 13 wherein the reactant is selected from the group consisting of nucleic acids, proteins, and carbohydrates.
 - 16. The fluid handling device of claim 1 wherein the diamond-like film comprises at least about 25 atomic percent carbon, from 0 to about 50

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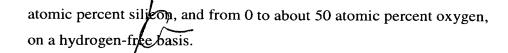
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- 17. The fluid handling device of claim 1 wherein the diamond-like film is also hydrophilic.
- 18. A fluid handling device comprising a microfluidic article comprising a microfluidic handling architecture comprising a fluid handling surface wherein at least a portion of the fluid handling surface includes a hydrophilic diamond-like film disposed thereon.
- 19. A fluid handling device comprising a substrate and an optically transmissive and hydrophilic film comprising at least about 25 atomic percent carbon, from 0 to about 50 atomic percent silicon, and from 0 to about 50 atomic percent oxygen, on a hydrogen-free basis, disposed on at least a portion of the substrate.
- 20. A fluid handling device comprising a substrate and a film comprising at least about 30 atomic percent carbon, at least about 25 atomic percent silicon, and less than about 45 atomic percent oxygen, on a hydrogen-free basis, disposed on at least a portion of the substrate.
- 21. The fluid handling device of claim 20 comprising a capillary having an internal surface and an external surface, wherein at least a portion of at least one of the internal or external surfaces has the film disposed thereon.
- 22. The fluid handling device of claim 21 wherein at least a portion of the external surface of the capillary has the film disposed thereon.
- 23. The fluid handling device of claim 20 comprising a microfluidic article comprising a microfluidic handling architecture including a fluid handling surface wherein at least a portion of the fluid handling surface has the film disposed thereon.

- A fluid handling device comprising a microfluidic article comprising a microfluidic handling architecture including a fluid handling surface wherein at least a portion thereof has disposed thereon a film comprising at least about 25 atomic percent carbon, from 0 to about 50 atomic percent silicon, and from 0 to about 50 atomic percent oxygen, on a hydrogen-free basis.
- 25. A fluid handling device comprising a microfluidic article comprising a microfluidic handling architecture including a non-fluid handling surface wherein at least a portion thereof has disposed thereon a diamond-like film that is optically transmissive, hydrophilic, or both.
- 26. A method of manufacturing a hydrophilic diamond-like film, the method comprising treating a diamond-like film in an oxygen-containing plasma.